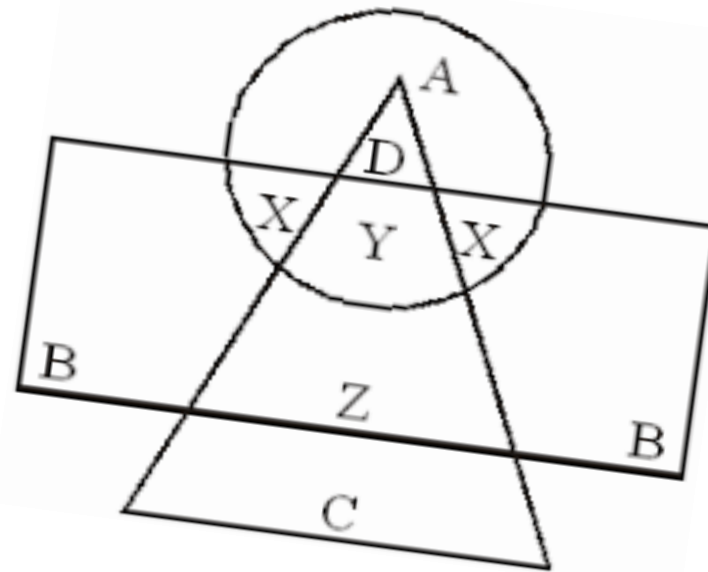


LOGICAL VENN DIAGRAMS



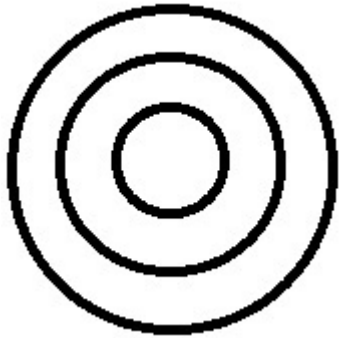
INTRODUCTION

- It is a process of showing complex relationship between 2-3 categories diagrammatically through various geometric structures.
- Intersection between two geometric structures indicate that they have something in common and total isolation indicates just opposite of that.



Possible Cases of Venn Diagram

Case 1:-



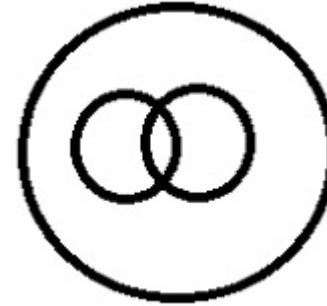
- There will be a series of sub cases one under another.

➤ Example:-

Color > Green > Light green

Light green color is a sub part of green color and both of them belongs to color group.

Case 2:-



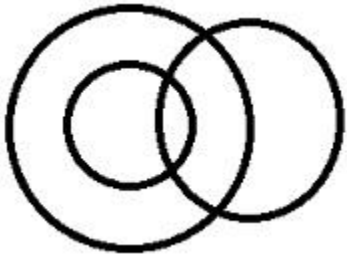
- One main category, under it two sub categories and both bear some similarities among them.

➤ Example:-

Males > Fathers, Brothers

Here fathers can be brothers and they are males, thus bear similarity.

Case 3:-



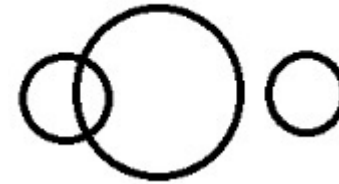
- One category may have one sub category. They both partially satisfy some conditions (not always).

➤ Example:-

Vegetable > Capsicum > Red

Some capsicums are red and so as some other vegetables.

Case 4:-

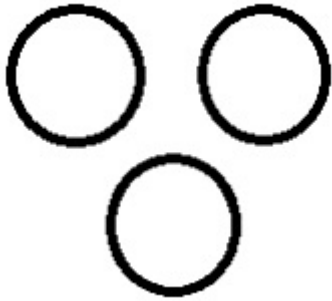


- Two have some common properties those do not match with third one.

➤ Example:-

Doctor > Males > Dogs

Case 5:-



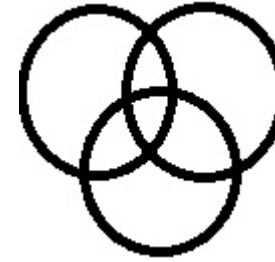
- Three sections having no common feature.

- Example:-

Dog > Cat > Tree

There is no logic of finding any common aspect among above three terms.

Case 6:-



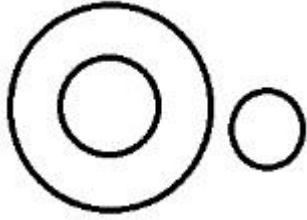
- A common place that satisfies all the properties of three individual sections.

- Example:-

Mother > Step mother > Sister-in law

A single woman can be all of the above said simultaneously.

Case 7:-



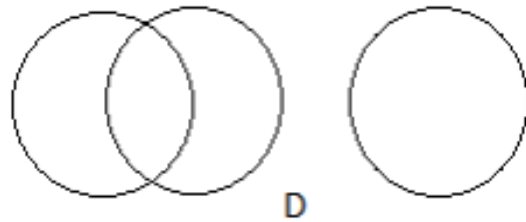
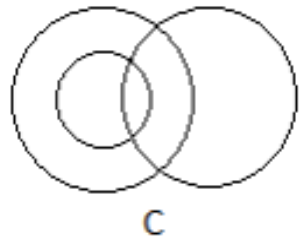
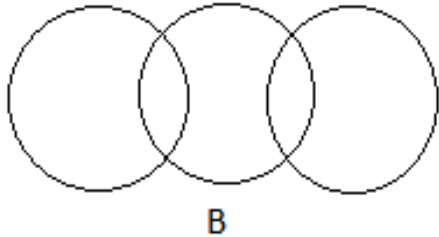
➤ Two are inter related, whereas third one has no relation with them.

➤ Example:-

Tree > Banana tree > Animal

Banana tree comes under tree category but “animal” has nothing to do with these 2 words.

1. Which of the following diagrams correctly represents lions, elephants, and animals?



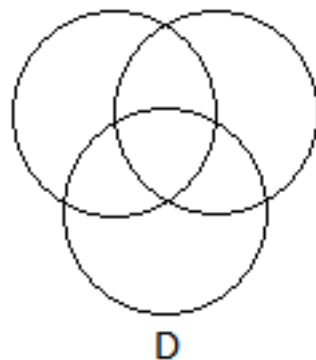
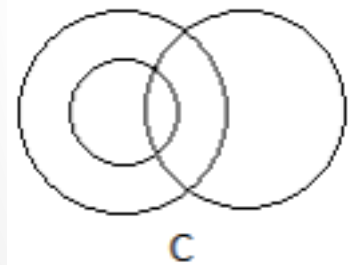
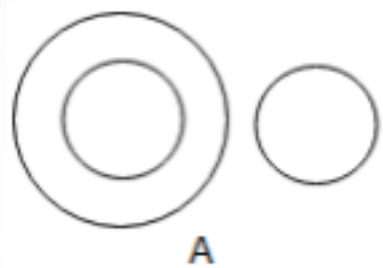
Answer: A

Explanation:



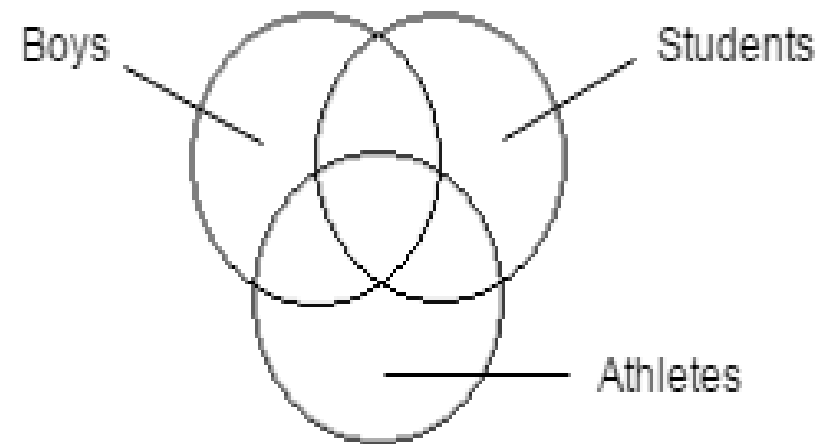
Lions and elephants have no relationship to each other, but both are animals.

2. Which of the following diagrams correctly shows the relationship between boys, athletes and students?



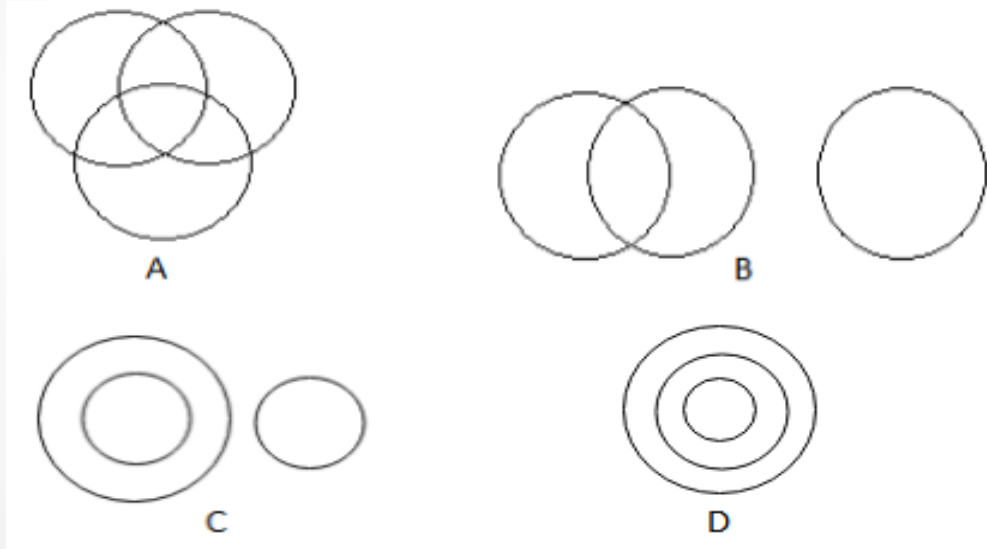
Answer: D

Explanation:



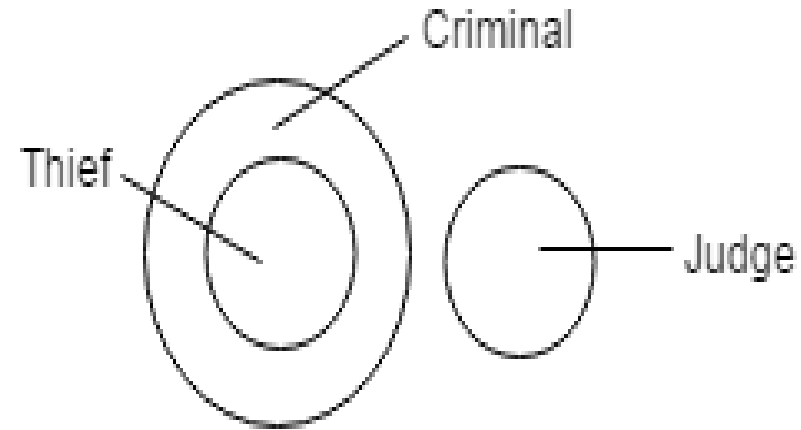
Some boys are athletes, and some boys are students. Also, some students are athletes. So, they are partly related to one another.

3. Select the diagram which correctly illustrates the relationship between a thief, criminal and judge?



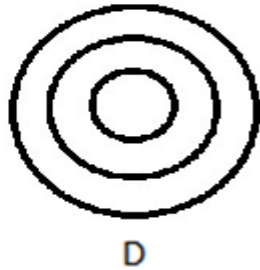
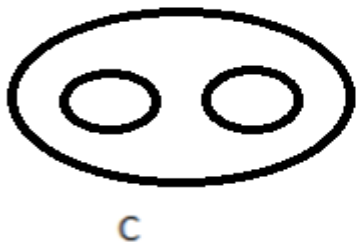
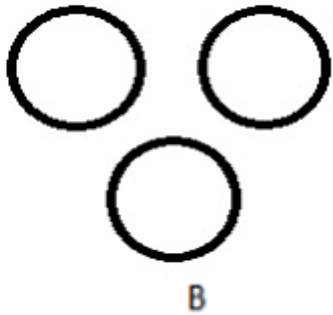
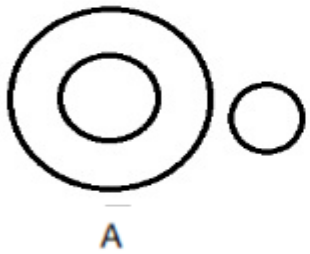
Answer: C

Explanation:



All thieves are criminals, and a judge is not related to a thief or criminal.

4. Which of the following diagrams indicates the best relation between Author, Lawyer and Singer ?



Answer: B

Explanation:

All the three are different professions.

5. Which of the following diagrams indicates the best relation between Men, Rodents and Living beings ?



A



B



C



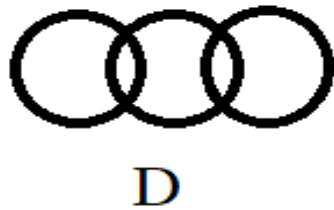
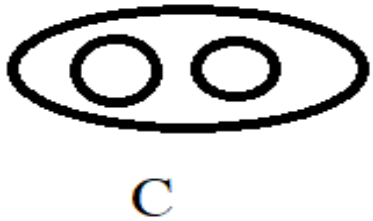
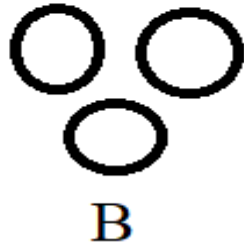
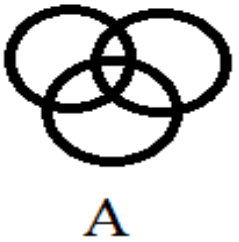
D

Answer: C

Explanation:

Men and Rodents are different from one another but both these belong to living beings.

6. Which of the following diagrams indicates the best relation between Teacher, Men and Women ?

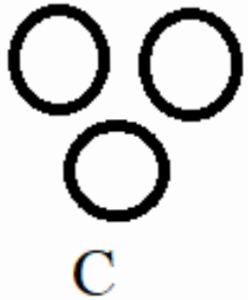
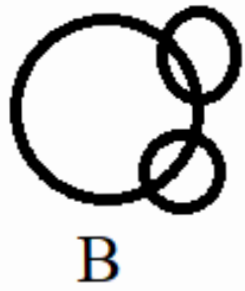
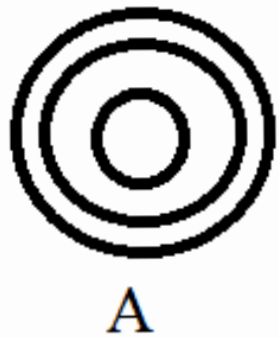


Answer: D

Explanation:

Men and Women are different from each other but some men may be teachers and some women may be teachers.

7. Which of the following diagrams indicates the best relation between Gold, Metal and Zinc ?



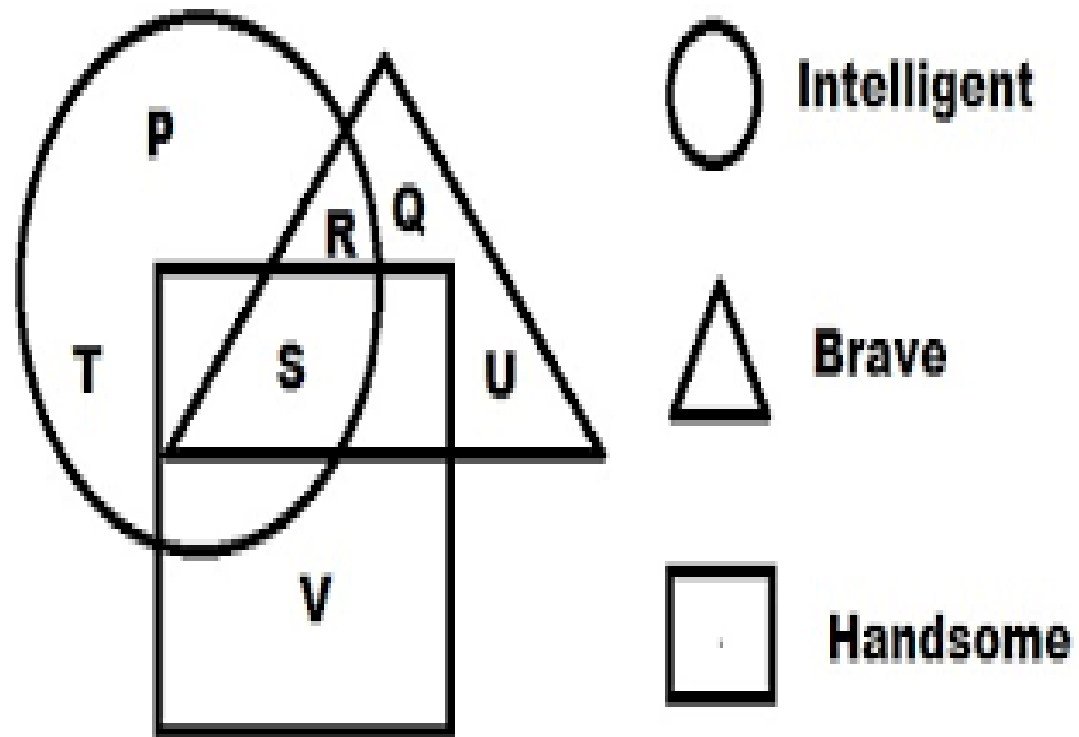
Answer: D

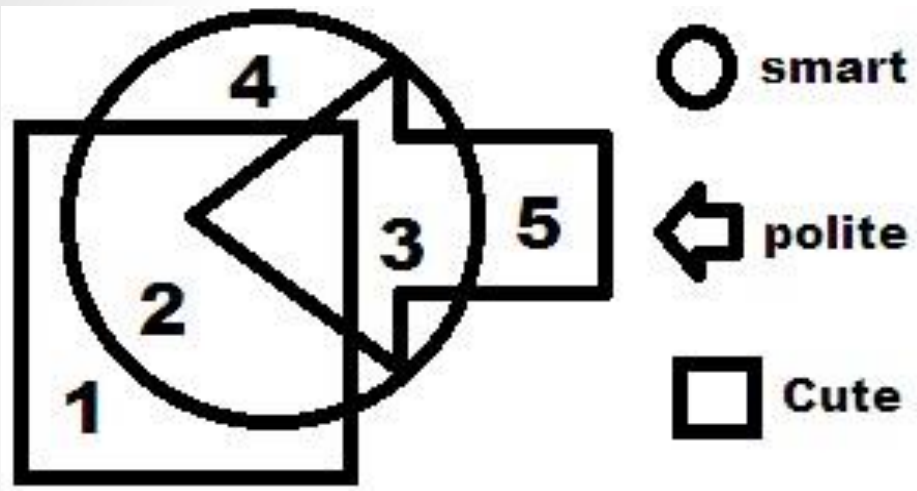
Explanation:

Gold and Zinc are different from each other but both are metal.

Another Type of Problems

- Intersection of various geometric structures.
- Each geometric structures will be having some elements of their own and each structure will bear some characteristics or class.
- Intersection of two or more structures will give an amalgamation that will change the property of each previous element by something new.





Five people are numbered and have some characteristics. Study the diagram to answer correctly.

8 - Which number person is smart and cute?

A - 1

B - 2

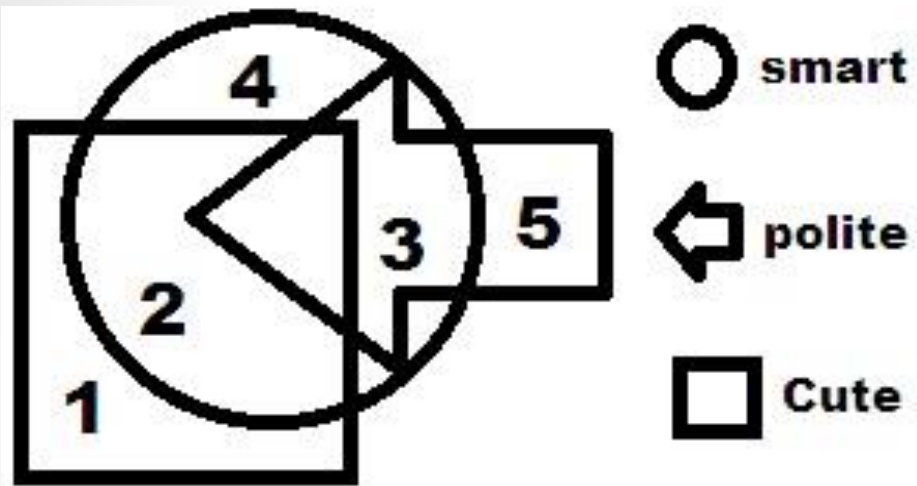
C - 3

D - 4

Answer – Option B

Explanation –

Number 2 lies in the common area of square and circle thus bears the characteristics of both structures.



Five people are numbered and have some characteristics. Study the diagram to answer correctly.

9 - Which number person is smart but neither polite nor cute?

A - 1

B - 2

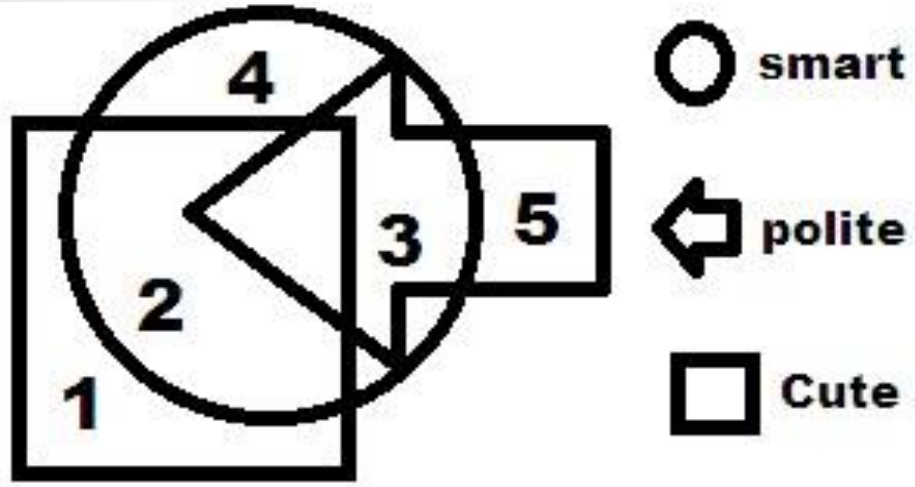
C - 3

D - 4

Answer – Option D

Explanation –

Number 4 lies in the circle area thus bear only the characteristics of being smart.



Five people are numbered and have some characteristics. Study the diagram to answer correctly.

10 - Which number person is smart, polite and cute?

A – 1

B – 2

C – 3

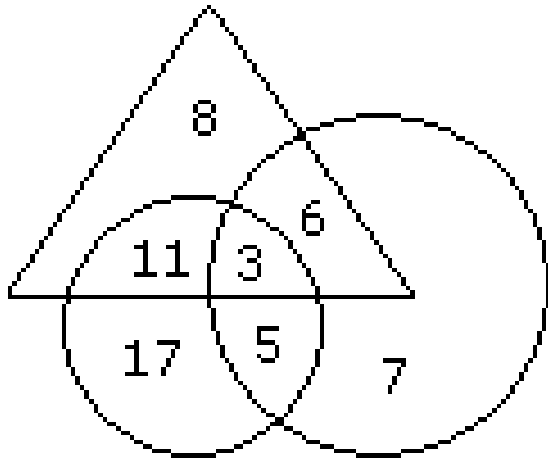
D - None of these

Answer – Option D

Explanation –

No such number is there that lies in the intersection area of all three geometrical structures.

Study the following figure and answer the questions given below.



 → Employed people

 → Backward people

 → Educated people

11 - How many educated people are employed ?

A – 9

B – 18

C – 20

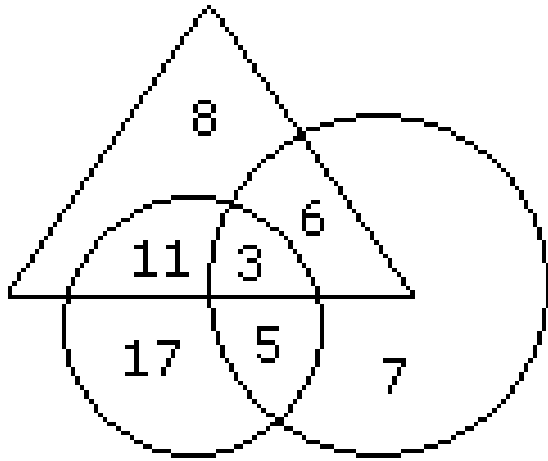
D - 15

Answer – Option A

Explanation –

Number of educated people who are employed = $3 + 6 = 9$.

Study the following figure and answer the questions given below.



 → Employed people

 → Backward people

 → Educated people

12 - How many backward people are educated ?

A – 9

B – 28

C – 14

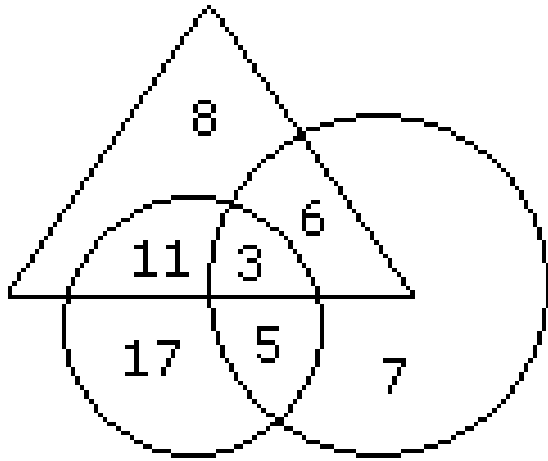
D - 16

Answer – Option C

Explanation –

Number of backward people are who are educated = $11 + 3 = 14$.

Study the following figure and answer the questions given below.



 → Employed people

 → Backward people

 → Educated people

13 - How many backward uneducated people are employed ?

A – 14

B – 5

C – 7

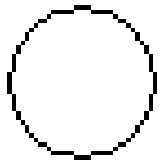
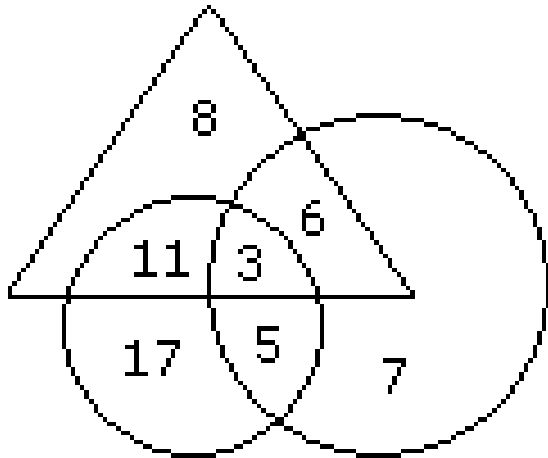
D - 11

Answer – Option B

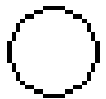
Explanation –

Number of backward uneducated people who are employed is 5.

Study the following figure and answer the questions given below.



→ Employed people



→ Backward people



→ Educated people

14 - How many backward people are not educated ?

A – 14

B – 3

C – 22

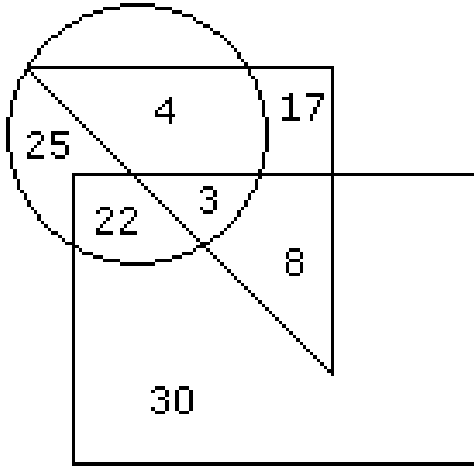
D - 25

Answer – Option C

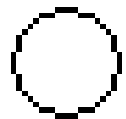
Explanation –

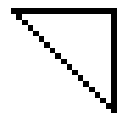
Number of backward people who are not educated = $17 + 5 = 22$.

Study the following figure and answer the questions given below.



 → Artists

 → Players

 → Doctors

15 - How many players are neither artists nor doctors ?

A – 25

B – 17

C – 5

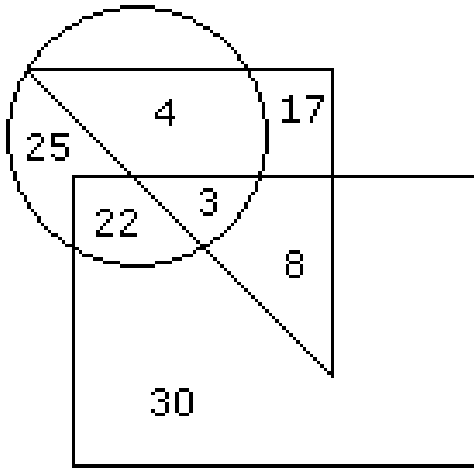
D - 10

Answer – Option A

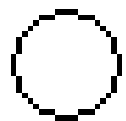
Explanation –

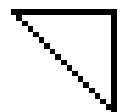
The number of players who are neither artists nor doctors is 25.

Study the following figure and answer the questions given below.



 → Artists

 → Players

 → Doctors

16 - How many artists are neither players nor doctors ?

A – 10

B – 17

C – 30

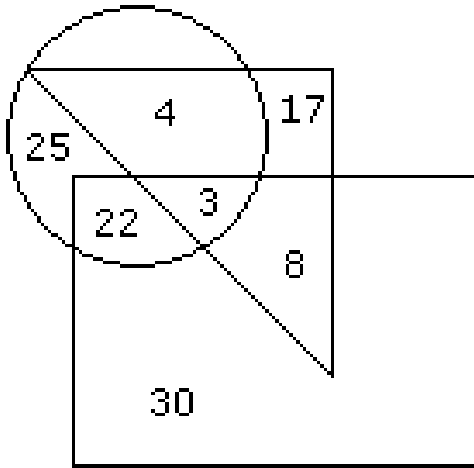
D - 15

Answer – Option C

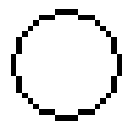
Explanation –

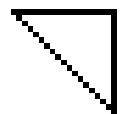
The number of artists who are neither players nor doctors is 30.

Study the following figure and answer the questions given below.



 → Artists

 → Players

 → Doctors

17 - How many artists are players ?

A – 5

B – 8

C – 25

D - 16

Answer – Option C

Explanation –

The number of artists who are players is $22 + 3 = 25$.